IN THE MATTER OF THE APPLICATION REGARDING CONVERSION OF PREMERA BLUE CROSS AND ITS AFFILIATES

Washington State Insurance Commissioner's Docket # G02-45

PRE-FILED DIRECT TESTIMONY OF:

Thomas R. McCarthy
National Economic Research Associates, Inc.

March 31, 2004

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Introduction, Credentials, and Summary of Opinions

Q. Please state your name.

A. My name is Thomas R. McCarthy.

Q. Please state your position and business address.

A. I am Senior Vice President of National Economic Research Associates, Inc. ("NERA"). NERA is a global firm of consulting economists founded in 1961. I am the head of its health care practice in the U.S. My business address is 777 South Figueroa Street, Suite 4200, Los Angeles, California, 90017.

Q. What is the purpose of your testimony?

A. NERA has been engaged by PREMERA, a Washington miscellaneous nonprofit corporation ("PREMERA"), Premera Blue Cross, a Washington nonprofit corporation ("PBC"), and certain of their affiliates (collectively "Premera") to provide an expert opinion in connection with Premera's proposal to convert from not-for-profit to for-profit status. In particular, we have been asked to evaluate whether the proposed conversion is likely to substantially lessen competition or tend to create a monopoly in the health coverage business, or cause any other adverse economic impacts in the markets in which Premera competes in the state of Washington.

Q. Please summarize your opinions.

A. We conclude that the proposed conversion is not going to "substantially lessen competition or tend to create a monopoly in the health coverage business" in the state of Washington. The markets that Premera competes in for health insurance and for provider services are competitive. The conversion is not going to change this. In particular, we find no evidence that the conversion is going to cause an increase in premiums to

consumers or a decrease in reimbursement rates to health care providers compared to competitive levels.

We also conclude that the proposed conversion is not going to reduce consumer access to health insurance products or health care providers. Premera will continue to focus on its financial viability, and it will continue to offer only those products and services that make commercial sense, whether it is a not-for-profit or for-profit company. In addition, Premera will continue to contract with health care providers in rural counties since it considers its large provider network to be one of its competitive strengths and it uses that advantage to compete for members, including the large multi-site employers that have employees located throughout the state.

Q. Have you submitted expert reports in this proceeding?

A. Yes. Along with my NERA colleague, Dr. Scott Thomas, I filed a report in this proceeding dated November 10, 2003, titled "Antitrust and Economic Impact Analysis of the Proposed Conversion of Premera Blue Cross in the State of Washington." We also filed a supplemental report dated March 5, 2004, titled "SUPPLEMENT TO Antitrust and Economic Impact Analysis of the Proposed Conversion of Premera Blue Cross in the State of Washington." Our reports analyze the likely economic effects of the Premera proposal and comment upon certain of the matters and conclusions contained in reports previously filed by consultants engaged by the staff of the Washington State Office of Insurance Commissioner (the "OIC Staff").

Q. Please describe your experience regarding health economics.

A. I hold a B.A. degree in economics from Assumption College in Worcester, Massachusetts, and M.A. and Ph.D. degrees in economics from the University of

Maryland. For the last twenty-five years or so, I have specialized in the study of industrial organization and health economics, focusing principally on antitrust and competitive issues in the health care marketplace, as well as on intellectual property issues involving medical devices. I have testified in a variety of antitrust cases relating to health care provider services and health care insurance markets. I have also made presentations to state and federal antitrust agencies and to a state insurance commission on the likely competitive effects of a wide range of health care provider mergers, health plan mergers, and medical device company mergers being reviewed by those agencies. Recently, I was invited by the Federal Trade Commission and the Department of Justice Antitrust Division to testify at three separate sessions of their Joint Hearings on Antitrust in Healthcare. Those sessions included testimony on potential monopoly problems and monopsony problems in health insurance markets. A more complete listing of my qualifications, publications, and prior testimony is provided in my curriculum vitae attached to this testimony as Exhibit TM 1.

Market Analysis and Approach

Q. How did you determine whether the markets in which Premera competes are competitive?

A. We used two different approaches: one based on an examination of "market structure," and another based on an examination of "competitive effects." Both are directed at determining whether Premera has market power in any of the markets in which it competes. By definition, if Premera does not have market power in any of those markets (and there is no evidence that any other insurer has market power), then those markets are competitive.

Q. How do you define market power in the context of this case?

A. Market power is the ability of Premera to profitably increase its premiums or lower its provider reimbursement rates on a sustained basis compared to long-run competitive levels by precluding the entry or expansion of competing insurers. With respect to the purchase of provider services, market power also requires that there be a decrease in the use of provider services as a result of the lower reimbursements. This is because an increase in the use of provider services caused by a decrease in reimbursement rates reflects a procompetitive increase in output and is not evidence of market power. Such a result makes consumers better off with more services being consumed as a result of lower input prices.

Q. Please explain the "market structure" and "competitive effects" approaches that you used to reach your opinions.

A. The "market structure" approach involves examining whether conditions in the markets in which Premera competes are likely to be conducive to anticompetitive behavior. If Premera has a very high share in each of the markets (called the "relevant markets"), if it faces few competitors in the markets, if entry and expansion are relatively difficult in the markets, *and* if there are no other structural factors that facilitate competition in the markets (such as regulatory oversight or countervailing market power on the other side of the affected markets), this would tend to support the conclusion that Premera could exercise market power (though these indicia are not dispositive given the inferential nature of this approach).

The "competitive effects" approach involves comparing Premera's actual performance in each of the markets (in terms of premiums, underwriting margins, and reimbursement rates) to the actual performance found under competitive conditions. If

Premera's premiums, underwriting margins, and reimbursement rates are significantly out of line with those found under competitive conditions, this would tend to support the conclusion that Premera has market power, though further analysis would likely be warranted.

Q. What was the first step followed in applying these two analytical approaches?

A. We first identified the relevant markets in which Premera competes on both the selling side of the health insurance business and the buying side of the provider services business. To do this, we identified both the product and geographic dimensions for all the markets in which Premera competes. We did so by relying on the principles of demand substitution and supply substitution.

Opinions Regarding the Market for the Sale of Health Insurance

Q. What is your opinion about the relevant market for the selling side, that is, the market for the sale of health insurance to employers, employees, and individuals?

A. We conclude that the relevant market that Premera competes in on the selling side of the health insurance business is "the market for all health insurance products in the state of Washington." This market includes all PPO and HMO-type products, all fully-funded and self-insured products, and all commercial and publicly-financed lines of business (i.e., individual, small group, large group, federal employees, state employees, Medicare managed care, Medicaid managed care, and Basic Health Plan). We reach this conclusion since we find no significant regulatory or operational barriers for an existing insurer to offer new products, expand into new lines of business, or expand into new geographic areas of the state. In addition, the publicly available information indicates that, during the last several years, there have been at least six instances of existing

insurers offering new products or expanding into new lines of business (including, for example, Asuris' 2004 expansion into the individual line of business in Eastern Washington). There also have been at least fourteen instances of existing insurers expanding from one part of the state into another (including four cases of expansion from Western Washington into Eastern Washington).

Q. Based on your review of the market structure and competitive effects, do you have an opinion as to whether Premera has market power on the selling side of the relevant market for health insurance in Washington?

A. Yes. It is our opinion that Premera does not have market power in the sale of health insurance in the state of Washington.

Q. What is the basis for your opinion?

A. Our opinion is based on the following findings:

- Premera has only a 28.4 percent share of the relevant market (based on fully-funded enrollment, the only data available for comparison purposes).
- Premera faces two large competitors (i.e., The Regence Group and Group Health) that offer most of the same products, compete in most of the same lines of business, have roughly the same share of the market, and have shown a willingness to expand geographically when a market opportunity arises.
- Premera faces a number of other competitors including some of the largest insurers in the country (e.g., Aetna, CIGNA, Health Net, and PacifiCare).
- Entry and expansion conditions in Washington appear relatively easy. There have been at least five instances of new entry into the state during the last several years (including Health Net's entry into Spokane at the end of 2002),

and at least three instances of existing insurers substantially increasing their membership (e.g., Aetna and Molina).

- Premera does not have the ability to increase its premiums to large groups above competitive levels since those groups could readily avoid the premium increase by self-insuring, as well as by switching to rival insurers.
- Premera does not have the ability to increase its premiums to small groups or individuals above competitive levels since there are a sufficient number of competitors, those lines of business are heavily regulated, and some of the individuals and small groups would likely be able to obtain many of the advantages available to large groups by joining associations.
- Based on statistical analysis, Premera's premiums are not significantly higher than its competitors, holding constant medical benefits, mix of membership, and inflation.
- Premera's underwriting margins have been in the mainstream of the margins earned by the other health plans that have operated in the state. Like many Washington insurers, Premera's underwriting margins have been relatively low, further indicating an absence of monopoly profits by any supplier in this relevant market. The Washington health insurance market appears to be very competitive based upon the consistently low underwriting margins that have been earned over the last six years by those selling insurance in Washington.

Q. Will the proposed conversion change the competitive conditions in the relevant market for health insurance in Washington?

A. No. There is nothing about the conversion that will alter the competitive structure or the performance of the market.

Opinions Regarding the Markets for the Purchase of Provider Services

Q. Did you examine the relevant markets on the buying side of the provider services business?

A. Yes. We focused our attention on the relevant geographic market question for purposes of identifying the relevant markets for provider services. Based on our prior experience in antitrust litigation and merger reviews, our knowledge of prior court cases, and our review of recent studies in the economics literature, we conclude that the relevant markets that Premera competes in on the buying side for provider services are at least as large as Health Service Areas ("HSAs") (which represent geographic areas that have been identified using hospital patient flow information for Medicare patients) or Metropolitan Statistical Areas ("MSAs"), and possibly even as large as Western Washington and Eastern Washington separately. However, for the purposes of evaluating even narrower possible geographic markets, we also examined reimbursement rates at the county level.

Q. Do you have an opinion as to whether Premera has market power on the buying side in any market for provider services?

A. Our opinion is that Premera does not have such market power. Our opinion is based on the following findings:

- Premera's share of the total purchase of provider services in Eastern Washington is less than 25 percent (based again on fully-funded enrollment). This result is generally the same whether we look at Eastern Washington as a single provider market or whether we look at the individual HSAs, MSAs, or even counties in Eastern Washington.

- Premera's fully-funded large and small group membership in Eastern Washington dropped by nearly 20,000 members between December 2001 and December 2002, indicating competitive losses to rival insurers.
- Premera faces at least five other insurers that have sizeable fully-funded membership in Eastern Washington (i.e., The Regence Group/Asuris, Group Health, Aetna, Community Health, and Molina).
- Premera also faces a number of insurers, third party administrators ("TPAs"), and rental networks that have significant self-insured membership in Eastern Washington (i.e., First Choice, CIGNA, PHCO, and Marsh Advantage).
- The Regence Group/Asuris and First Choice (which is mainly a rental network) both have very competitive provider networks in Eastern Washington. Group Health also has a very strong provider network, particularly in the Spokane area, and Aetna has its own provider network that it is strengthening. Finally, it is our understanding that CIGNA plans to have its own provider network by 2005; currently, it rents the First Choice network.
- Entry and expansion conditions for insurers in Eastern Washington appear relatively easy. There have been at least five instances of new insurers entering Eastern Washington during the last several years (including Health Net's recent entry into Spokane at the end of 2002), and there have been at least four instances of existing insurers gaining substantial membership (i.e., at least 5,000 additional members between 2001 and 2002; CIGNA in large group, Group Health in large group, The Regence Group/Asuris in small group, and Community Health in Medicaid).

- Entry and expansion conditions for physicians in Eastern Washington also appear to be relatively easy. During the 1994 through 2002 period, the number of physicians practicing in Eastern Washington steadily increased from 2,027 in 1994 to 2,549 in 2002. Even though 17 of the 20 counties in Eastern Washington experienced a net increase over the whole period, many of the smaller counties actually experienced decreases from year-to-year. These findings indicate that the physicians in Eastern Washington are fairly mobile. They also indicate that Premera has not been underpaying the physicians in Eastern Washington since the number of physicians practicing in that area has grown by almost 24 percent. Moreover, this growth exceeds the rate of growth of the population of Eastern Washington during the same time period, so the per capita physician supply has also increased over this time period.
- Premera must have contracts with a sufficient number of the providers in the rural Eastern Washington counties if it wants to sell to large employers whose employees live outside the counties where their headquarters are located. In many of those counties, there are very few providers and, as a result, those providers have considerable negotiating strength. In addition, Washington State law allows rural public hospital districts to negotiate collectively with Premera.
- Based on statistical analysis, Premera's physician reimbursement rates in Eastern Washington are not significantly lower than its rates in Western Washington, holding constant intensity of service and physician specialty.

This is true regardless of whether the analysis is performed on a regional, HSA, MSA, or county level. Every economic analyst who has reviewed this conversion agrees that provider markets in Western Washington are very competitive and, thus, represent a competitive benchmark against which to measure reimbursement rates in Eastern Washington.

Q. Will the proposed conversion change competitive conditions for provider services in Eastern Washington?

A. No. There is nothing about the conversion that will alter the structure or the performance of the market.

Access to Health Insurance and Health Care Providers

Q. Do you have an opinion as to whether the conversion is likely to reduce access to either health insurance products or health care providers?

A. Yes. In our opinion, the conversion will not change Premera's behavior in the markets in which it competes and therefore will not reduce access. Specifically, the results show that Premera in the past has had to focus on the bottom line and has offered only those products and services that make commercial sense. It has done so due to competitive pressures. For example, during the last several years, Premera has cut back significantly on the counties in which it offers certain lines of business (e.g., Healthy Options and Basic Health Plan), and it has stopped offering other lines of business (e.g., Medicare managed care and Public Employees Benefit Board in 2004) and certain products (e.g., HMO products) altogether.

Our results also show that, even though Premera has cut back significantly on the counties in which it offers certain lines of business, it is very unlikely that it would stop serving those counties altogether, for several good business reasons. First, Premera

considers its large provider network to be one of its competitive strengths and it uses that advantage to compete for members, particularly with large multi-site employers that have employees located throughout the state. Second, there is some risk that Premera could be challenged on the rights to its Blue Cross or Blue Shield marks in any "abandoned" county if it does not provide a network that can be used by Blue plans in other states when those out-of-state Blue plans sell a promise of national coverage to a multi-state company headquartered in their state.

Our results further show that it is very unlikely that Premera would ever pull out of the large group, small group, and individual lines of business in the state altogether since the Health Insurance Portability and Accountability Act ("HIPAA") would prevent it from re-entering any of those lines of business for five years. In addition, studies done for the proposed CareFirst and BCBS of North Carolina conversions found that past conversions have not had any meaningful effect on accessibility. Finally, our statistical analysis finds that the not-for-profit insurers in Washington have behaved no differently than the for-profit insurers, at least with respect to the level of premiums. This finding is consistent with competition forcing all insurers, whether for-profit or not-for-profit, to compete aggressively for business by keeping premiums low and keeping expenses in check.

Assurances Provided by Premera

Q. What is your opinion on the effect of Premera's assurances regarding its (1) alleged ability to raise rates for individual and small group products, and (2) geographic network and small group product access?

A. Because the markets in which Premera competes are competitive, the conversion will not result in increased premiums to consumers or lower reimbursement rates to

providers compared to competitive levels. Accordingly, we do not believe that the assurances are needed. Competition will continue to force Premera to charge consumers reasonable premiums and pay providers reasonable reimbursement rates. It will also force Premera to offer those products and to serve those geographic areas that will contribute positively to its bottom-line.

Q. What is your opinion on the proposal that the assurances be extended from two to three years?

A. These assurances will likely create operational inflexibilities and competitive disadvantages for Premera that will only worsen over time. Therefore, they should not be extended.

Premera's Pricing of its Administrative Service Contract Business

Q. What is your opinion on Premera's pricing of its Administrative Service Contract (ASC) business?

A. First, the ASC rates that Premera is able to charge are dictated by competition in the market. Second, these rates are rational, efficient and profitable. The additional revenue that Premera earns from the ASC business more than covers the variable cost of serving that business, and as such, adds positively to Premera's bottom-line.

Q. Does this conclude your testimony?

A. Yes.

VERIFICATION

I, THOMAS R. MCCARTHY, declare under penalty of perjury of the laws of the State of Washington that the foregoing answers are true and correct.

Dated this 29th day of March, 2004, at Los Angeles, California.

THOMAS R. MCCARTHY

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Dr. McCarthy received a B.A. in Economics from Assumption College in Worcester, Massachusetts and Master's and Ph.D. degrees in Economics from the University of Maryland under a National Defense Education Act Fellowship. After teaching microeconomic theory and urban economics at the University of Maryland, Dr. McCarthy joined the faculty of the School of Economics and Management of Oakland University in Michigan. There he taught graduate and undergraduate microeconomics as well as health economics, his area of special interest.

Dr. McCarthy joined NERA in 1983 and now directs NERA's health care practice in the U.S., a practice that specializes in the economic analysis of regulatory, public policy and litigation matters in health care markets. His own projects include analyzing the competitive effects of more than 100 health care industry mergers, including evaluating the horizontal and vertical issues created by mergers of hospitals, hospital systems, health insurers, physician groups, physician practice management companies, imaging and other medical device manufacturers, and home health care companies. In a variety of health care antitrust liability and damages cases, he has analyzed exclusive contracts, physician staff privileges issues, exclusions from managed care panels, alleged foreclosures due to shifting referral patterns, joint ventures, hospital and physician monopolization cases, and state action immunity issues involving certificates of public advantage covering recent hospital mergers in Montana and South Carolina. He has also analyzed class certification and liability issues in class action cases brought against HMOs. As part of his policy work, Dr. McCarthy has analyzed Medicare prescription drug proposals. He is also co-editor and a principal author of a year-long, two-volume study of health care reform in 12 industrialized countries, published by Kluwer.

Another area of specialization for Dr. McCarthy has been the economics of intellectual property protection, including the estimation of contract, trade dress, trade secret and patent damages, particularly for medical equipment and devices but also including computer hardware, CD-Rs, supermarket equipment, satellites, and agricultural products. He has also worked on

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antitrust, damages, and class certification matters involving the pharmaceutical, soft drink, agriculture, candy, ice cream, auto parts, oil, video distribution, and newspaper industries. Other major projects include the development of affirmative action plans and the estimation of damages resulting from a major oil spill.

Prior to joining NERA, Dr. McCarthy was a staff economist with the Federal Trade Commission conducting studies of regulation and competition in health care markets. One such study examined the competitive effects of certificate-of-need regulation in the hospital market.

Dr. McCarthy has written several papers analyzing competition and antitrust damages in health care as well as on transportation issues in urban economics. These include an article in the *Journal of Health Economics* on competition in the physician services market and articles in recent or forthcoming ABA monographs on antitrust damages in health care cases, hospital merger efficiencies, monopoly and monopsony issues between payers and providers, and defining geographic markets in hospital mergers. Other research activities include presentations at professional meetings and his serving as an invited panelist or moderator for various health care policy conferences. He has also made presentations on such subjects as hospital mergers, health plan mergers, health care reform in the U.S. and around the world, "Tobacco II" class action litigation against HMO's, antitrust damages, wrongful termination, and the confiscation of intellectual property rights through price and profit regulation. Most recently, he was invited by the Federal Trade Commission and the Antitrust Division of the Department of Justice to testify at three different sessions about monopoly and monopsony issues in health care at their joint hearings on Health Care and Competition Law and Policy.

Dr. McCarthy is a member of the American Economic Association and an associate member of both the American Health Lawyers Association and the American Bar Association's Section of Antitrust Law, including membership with the Section's Health Care Committee. He also served on the American Bar Association's Task Force on Hospital Mergers.

EDUCATION

UNIVERSITY OF MARYLAND
Ph.D., Economics, 1980

UNIVERSITY OF MARYLAND
M.A., Economics, 1973

ASSUMPTION COLLEGE
B.A., Economics, 1971

CANISIUS COLLEGE, 1967-1969

EMPLOYMENT

11/96-present	NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC. *Senior Vice President.* *Member, Board of Directors.*
11/89-11/96	*Vice President.*
2/86-11/89	*Senior Consultant and Project Director.*
12/83-1/86	*Senior Analyst.*
	FEDERAL TRADE COMMISSION
1982-1983	*Staff Economist*, Division of Regulatory Analysis, Bureau of Economics
	OAKLAND UNIVERSITY
1978-1982	*Assistant Professor*, School of Economics and Management
	BLUE CROSS/BLUE SHIELD OF MICHIGAN
1980-1982	*Consultant.*
	DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
1978-1980	*Sole-source Contractor*, Health Care Financing Administration
	UNIVERSITY OF MARYLAND
1975-1978	*Instructor*, Department of Economics
	GENERAL ELECTRIC TEMPO
1975-1978	*Consultant*, Center for Advanced Studies
	UNIVERSITY OF MARYLAND
1975	*Teaching Assistant*, Department of Economics
	UNIVERSITY OF MARYLAND
1971-1973	*National Defense Education Act Teaching Fellow.*

FELLOWSHIPS, AWARDS, MEMBERSHIPS

Wall Street Journal Award for Outstanding Achievement in Economics, Assumption College, 1971

Graduate Assistantship, University of Maryland, 1974-1975

National Defense Education Act Fellowship, University of Maryland, 1971-1974

Outstanding Faculty Award, Oakland University Chapter of the Golden Key National Honor Society, 1981

Member, American Economic Association

Member, American Health Lawyers Association

Associate Member, American Bar Association, including membership in Section of Antitrust Law and Health Care Committee

Member, ABA Task Force on Hospital Mergers

PUBLICATIONS

"Geographic Market Issues in Hospital Mergers," Chapter 3 (with Scott Thomas) in Douglas C. Ross and Mark J. Horoschak, *Health Care Mergers and Acquisitions Handbook*, Chicago: American Bar Association, 2003.

"Antitrust Issues Between Payers and Providers," (with Scott Thomas) prepared for the ABA-AHLA Health Care Antitrust Meetings, Washington DC, May 17-18, 2001. (Reprinted in two parts in *Antitrust Health Care Chronicle*, Chicago: American Bar Association, Spring 2002 and Summer 2002.)

"Efficiencies Analysis in Hospital Mergers," (with Scott Thomas and Lawrence Wu) *Antitrust Health Care Chronicle*, Volume 13, No. 1 (Winter 1999), pp. 2-11. (Revised version of article found in Howard Feller, *Antitrust and Healthcare Insights into Analysis and Enforcement*, Chicago: American Bar Association, Spring 1999.)

"Analyzing Damages in Health Care Antitrust Cases," (with Scott Thomas), *Antitrust Developments in Evolving Health Care Markets*, American Bar Association, 1996, pp. 67-96.

"Health Care Reforms – Are They Answering the Right Questions?" *Adapting a Global Industry to the New Health Care Environment*, Proceedings of the *Financial Times* World Pharmaceuticals Conference, March 23 and 24, 1994.

Financing Health Care, co-editor (with Ullrich Hoffmeyer), Kluwer Academic Press, 1994.

- Co-author, Chapter 2; "The Prototype" (with Ullrich Hoffmeyer)
- Co-author, Chapter 14; "The Health Care System of the United States" (with Julie Minnis)

"Health Care Funding and Its Impact on the Balance of Supply, Demand and the Meeting of Needs," *A New Socio-Economic Order in Twenty-First Century Europe*, Conference Proceedings of the General Assembly of the European Federation of Pharmaceutical Industries' Associations, 1993, pp. 47-54.

"U.S. Health Care Reform: NERA Offers a Number of Recommendations," (with Julie Minnis) *Viewpoint*, Vol. XXII, No. 1 (Winter 1993), pp. 15-21.

"The Effect of City Size on Journey to Work Behavior: Some Empirical Evidence" (with Oded Izraeli), *Perspectives in Urban Geography*, Volume V (Concept Publishing Company, New Delhi, India, 1987).

"The Competitive Nature of the Primary Care Physician Services Market," *Journal of Health Economics*, Vol. 4, No. 2 (June 1985).

"Variations in Travel Distance, Travel Times and Modal Choice Among SMSAs" (with Oded Izraeli), *Journal of Transport Economics and Policy*, May 1985.

"Beyond Goldfarb: Applying Traditional Antitrust Analysis to Changing Health Markets" (with Geraldine Alpert), *The Antitrust Bulletin*, Vol. 24, No. 2 (Summer 1984), pp. 165-204.

"Commentary," in *A New Approach to the Economics of Health Care*, Mancur Olson, ed., American Enterprise Institute, Washington, D.C. (December 1981). A review of four papers on Hospital Regulation presented at AEI conference on "Health Care-Professional Ethics, Government Regulation, or Markets," September 25-26, 1980.

CONFERENCE PAPERS AND PRESENTATIONS

"Health Insurance Monopsony – Competitive Effects," testimony and presentation to The Federal Trade Commission and The Department of Justice Antitrust Division, Hearings on Health Care and Competition Law and Policy, Washington, DC, April 25, 2003.

"Health Insurance Monopsony – Market Definition," testimony and presentation to The Federal Trade Commission and The Department of Justice Antitrust Division, Hearings on Health Care and Competition Law and Policy, Washington, DC, April 24, 2003.

"Contracting Practices," testimony and presentation to The Federal Trade Commission and The Department of Justice Antitrust Division, Hearings on Health Care and Competition Law and Policy, Washington, DC, March 27, 2003.

Economics v. Daubert: Roundtable and Moot Hearing, Moderator, NERA Seminar on Antitrust and Trade Regulation, Santa Fe, NM, July 6, 2002.

"Leadership in Challenging Times," Directors' Roundtable speech and discussion with the Honorable Timothy Muris, Chairman of the Federal Trade Commission, Los Angeles, CA, April 18, 2002.

"Antitrust Issues Affecting Payors," presentation and paper to conference on "Antitrust in Healthcare," sponsored by the ABA Section of Antitrust Law, the ABA Health Law Section, and the American Health Lawyers Association, Washington, D.C., May 17-18, 2001.

"Why Tobacco II: What Changes Do Plaintiffs Want in the Use of Financial Incentives in the Managed Care Industry?" Moderator and panelist at Marsh Health Spectrum Forum on Managed Care Organization Enterprise Risk, New Orleans, LA, July 13, 2000.

"Use of Economists – Help or Hindrance?" Workshop presentation at American Health Lawyers' Association conference on "Antitrust in the Healthcare Field," Arlington, VA, February 17, 2000.

"Aetna's Acquisition of Prudential Health Care," presentation at D.C. Bar Association luncheon, Washington, D.C., December 14, 1999.

"Restructuring and Competition in the Health Insurance Industry," presented at NERA Seminar on Antitrust and Trade Regulation, Santa Fe, NM, July 10, 1999.

"Efficiencies Analysis in Hospital Mergers," speech at the ABA Conference on Antitrust Issues in Health Care, sponsored by the ABA Section of Antitrust Law and the Section of Health Law, in New Orleans, LA, October 16, 1998.

"Restructuring and Competition in the Health Care Industry," presented at NERA Seminar on Antitrust and Trade Regulation, Santa Fe, NM, July 11, 1998.

"Overview of International Health Care Systems," presentation to the Eli Lilly and UCLA Anderson School of Business' 1998 Global Health Care Conference on "Managing Evolving Health Care," Los Angeles, CA, June 26, 1998.

"Current Antitrust Issues for Health Plans," presented to the American Association of Health Plans' 8th Annual Managed Care Law Conference, San Diego, CA, April 27-29, 1997.

"Certificates of Public Advantage: The Example of a Great Falls Hospital Merger," presented at NERA Seminar on Antitrust and Trade Regulation, Santa Fe, NM, July 4, 1996.

"Hospital Mergers and State Action Immunity," speech before the State Action/Noerr Doctrine Committee at the American Bar Association meetings of the Section of Antitrust Law, Washington, D.C., March 27, 1996.

"The Economics of Vertical Mergers," presented to Preston, Gates & Ellis Conference on "Antitrust: Does the Tiger Again Have Teeth?" Seattle, WA, May 5, 1995.

"Analyzing Damages in a Health Care Antitrust Case," presented at American Bar Association Conference on Antitrust and Health Care, co-sponsored by the Section of Antitrust Law and the American Bar Association Forum on Health Care, New Orleans, LA, October 7, 1994.

"Health Care Reforms Worldwide," presented at William M. Mercer International Conference, New York, NY, September 29, 1994.

"Employer Mandates in Health Care Reform," presented at NERA Seminar on Antitrust and Trade Regulation, Santa Fe, NM, July 7, 1994.

"Health Care Reforms – Are They Answering the Right Questions?" Speech to the *Financial Times* World Pharmaceuticals Conference entitled Adapting a Global Industry to the New Health Care Environment, London, U.K., March 23, 1994.

"Establishing the Relevant Market in Health Care Cases," presented at the National Health Lawyers Association meetings on Antitrust in the Health Care Field, Washington, D.C., February 18, 1994.

"Cost Crisis in Health Care: A Global Convergence Toward Market-Based Solutions," sponsored by The Center for Strategic and International Studies. The results of NERA's 16-volume study of health care reform in 12 industrialized countries were presented to Congressional staffs on September 15, 1993 in the Senate's Hart Building, Washington, D.C. (with U. Hoffmeyer and R. Rapp).

"The Implications of Health Care Reform for Antitrust Litigation," presented at NERA Seminar on Antitrust and Trade Regulation, Santa Fe, NM, July 10, 1993.

"Health Care Funding: It's Impact on the Balance of Supply, Demand and the Meeting of Needs," presented at the Annual Conference of the European Federation of Pharmaceutical Industries' Associations, Salzburg, Austria, May 25, 1993.

"Health Care Reform and the European Economic Community," presentation to representatives of various Directorates General of the European Commission, including Mr. Fernand Saur, in charge of pharmaceutical policy for the EC, Brussels, Belgium, May 13, 1993.

"Financing Health Care, with Particular Reference to Medicines," presentation of year-long study to CEOs of 35 R&D based pharmaceutical companies, Washington, D.C., April 1, 1993.

Discussant, "The Proposed Dutch Health Care System: Moving Away from Employer-Based Health Insurance," by Warren Greenberg, American Economic Association Meetings, Anaheim, CA, January 7, 1993.

"Effective Use of Economists in Health Care Litigation," presented at the National Health Lawyers Association meetings on Antitrust in the Health Care Field. Washington, D.C., January 29-31, 1992.

"Calculating Damages For Lost Earnings," presented at NERA Seminar on Calculating Economic Damages in Employment Cases, Los Angeles, CA, March 26, 1991.

"Valuing Intangibles in Transfer Pricing Cases," presented at NERA Seminar on Antitrust and Trade Regulation, Santa Fe, NM, July 7, 1990.

"Estimating Patent Infringement Damages," NERA Seminar on New Developments in the Economics of Patent Infringement Litigation, San Francisco, CA, and Los Angeles, CA, December 5 and 6, 1989.

"Competition and Cooperation in the Provision of Health Care," presented at NERA Seminar on Contracting in the NHS, London, UK, September 11, 1989.

"A Comparison of the Cluster of Services Approach with the Product Line Approach in Analyzing Hospital Mergers and Acquisitions," presented at NERA Seminar on Antitrust and Trade Regulation, Santa Fe, NM, July 1987 and Young Partners Luncheon Series, New York, NY, October 5, 1987.

"The Application of Franchising Concepts in the Health Care Industry," workshop presented to the Ninth Annual American Bar Association's Forum Committee on Franchising, San Antonio, TX, October 23-24, 1986.

"Misuse and Confiscation of Intellectual Property," presented at a NERA Seminar on Patents: The New Economics (Infringement, Misuse and Damages), New York, NY, April 17, 1986.

"Calculating Economic Damages in Wrongful Termination Cases," presented at the First Annual Employment Litigation Workshop sponsored by the *Employee Relations Law Journal*, Williamsburg, VA, September 18-20, 1985.

"An Economic Analysis of Certificate of Need Laws" (with David Kass), presented at the American Economic Association Meetings, San Francisco, CA, December 1983.

"Medical, Legal, and Economic Ramifications of Changes in the Health Care System," panelist at the American Enterprise Institute Conference on "Restructuring the Health Care Financing System: Policies and Programs" Washington, DC, January 26-27, 1983.

"A Reexamination of Medical Society Control of Blue Shield Plans," discussant of Arnould and Debrock paper at the Eastern Economic Association Meetings, Washington, DC, April 29, 1982.

"Public Policy Toward the Health Care Sector," presented to the Detroit Chapter of the National Association of Health Services Executives, Pontiac, MI, June 15, 1982.

Reviewer of four papers on "Regulation–Can It Improve Incentives?" at the American Enterprise Institute Conference on "Health Care–Professional Ethics, Government Regulation, or Markets?" Washington, DC, September 25-26, 1980.

"A Model of the Primary Care Physician Firm," presented at the Eastern Economic Association Meetings, Montreal, Canada, May 8-10, 1980.

Moderator, Conference on Physician Manpower Issues – Health Economists' Views (Reinhardt, Sloan), Oakland University Health Education Program, Rochester, MI, October 16, 1979.

DEPOSITION TESTIMONY

Rocky Mountain Medical Center v. Northern Utah Healthcare Corporation, et al., October 16, 2003.

Retractable Technologies, Inc. v. Becton Dickinson & Company, et al., August 25, 2003.

In the Matter of Certain Recordable Compact Discs and Rewritable Compact Discs (United States International Trade Commission Investigation), May 23, 2003.

McKenzie-Willamette v. PeaceHealth, April 17, 2003.

Del Monte Fresh Produce Company and Del Monte Fresh Produce N.A., Inc. v. Dole Food Company, Inc. and Dole Fresh Fruit Company, January 21, 2002.

Yvonne Green, on her behalf and on behalf of all others similarly situated, v. Aetna U.S. Healthcare, Inc., et al., October 26, 2001.

In Re: Aetna, Inc. Securities Litigation, June 21 and July 19, 2000.

Boston Scientific Corporation v. Mentor Medical, Inc., August 21, 1998.

The County of Tuolumne and Eric Runte v. Sonora Community Hospital, et al., October 2-3, 1997.

St. Mary Medical Group, Inc. v . M & C ProActive Management, Ltd., et al., April 18, 1997.

COBE Laboratories, Inc. v. AVECOR Cardiovascular, Inc., June 5, 1996.

Allergan Medical Optics and Microtech, Inc. v. Staar Surgical Co., Inc., May 28, 1996.

American Council of Certified Podiatric Physicians and Surgeons v. American Board of Podiatric Surgery and American Podiatric Medical Association, March 14, 1996.

Retina Associates, P.A. v. Southern Baptist Hospital of Florida, Inc., January 18-19, 1996.

Santa Cruz Medical Clinic and Derjjan Associates, Inc. v. Dominican Santa Cruz Hospital, September 5-6, 1995, October 3-4, 1995 and February 2, 1996.

Trylon Corporation v. Metwest, Inc. and Unilab Corporation, April 7, 1995.

Wang Laboratories, Inc. v. Mitsubishi Electronics America, Inc., et al., March 8, 1994 and June 8, 1994.

American Health Advisors and William Phillips v. The University of Texas System, et al., November 9, 1993.

John A. Bakos, M.D. v. Roseville Community Hospital, et al. and John A. Bakos, M.D. v. Donald Franks, M.D., et al., October 8, 1993.

Diasonics, Inc. v. Acuson Corporation, December 8-9, 1992, March 15 and March 24, 1993.

David B. Kaye, M.D., et al. v. California Eye Institute, et al., December 28-29, 1992.

Gerhard Flegel, D.O. and Richard Still, D.O. v. Christian Hospital Northeast-Northwest, et al., August 28, 1992.

Lawrence Leyba, D.O. v. Hartmut Renger, M.D., Anesthesia Specialists of Albuquerque and St. Joseph's Health Care Corporation, August 22, 1991.

Dan A. Morgenstern, M.D. v. Charles S. Wilson, M.D., et al., July 18-19, 1991.

Colorado Orthopedic Dance and Athletic Rehabilitation, P.C. and Linda Perkin v. Preferred Independent Physical Therapy Organization, Inc., October 4, 1990.

Jeanne Call, et al. v. Prudential Insurance Company of America, et al., September 5, 1990.

Weldotron Corporation v. Hobart Corporation and Waldyssa, S.A., March 6-9, 1990, April 30, 1990 and May 1-4, 1990.

AB Food Products, Inc. v. Fabrica de Chocolates La Azteca, The Quaker Oats Company and Gabriel Tello, January 3, 1990.

Thomas Andrew Cherewick and Therapeutic Radiology, P.S.C. v. Northern Rockies Regional Cancer Treatment Center, et al., February 9, 1989.

Dreyer's Grand Ice Cream, Inc. v. Popsicle Industries, Inc., Sara Lee Corporation, and DOES 1-100, December 9, 1988 and December 12, 1988.

Michigan State Podiatry Association, et al. v. Blue Cross and Blue Shield of Michigan and Eugene Harper, D.P.M., et al. v. Blue Cross and Blue Shield of Michigan, July 20 and 21, 1987.

Sun Drop Bottling Company, Inc., et al. v. Coca-Cola Bottling Co. Consolidated and Pepsi-Cola Bottling Company of Charlotte, Inc., January 30 and 31, 1986.

Wordsman v. Xerox Corporation, October 9, 1985.

TRIAL TESTIMONY

McKenzie-Willamette Hospital v. PeaceHealth (U.S. District Court, District of Oregon), October 22-23, 2003.

David M. Odom v. Fairbanks Memorial Hospital, et al. (Superior Court of the State of Alaska, Fourth Judicial District of Fairbanks), March 14, 2002.

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Wang Laboratories, Inc. v. Mitsubishi Electronics *America, Inc., et al.*, (U.S. District Court, Central District of California), June 28, 1994.

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Dan A. Morgenstern, M.D. v. Charles S. Wilson, M.D., et al. (U.S. District Court, District of Nebraska), December 9-10, 1991 and September 8-10, 1992.

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Trylon Corporation v. Metwest, Inc. and Unilab Corporation (binding arbitration before Judge Weil), April 19, April 21, May 29, 1995 and July 10, 1995.

TESTIMONY PROVIDED TO THE INTERNATIONAL TRADE COMMISSION

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TESTIMONY PROVIDED TO STATE AGENCIES

New Mexico Division of Insurance, Testimony in support of Cimarron Health Plan's acquisition of QualMed Plans for Health, Santa Fe, New Mexico, August 30, 1999.

Florida State Department of Insurance, (written) Testimony in support of Aetna, Inc.'s acquisition of Prudential Health Care's Florida Division, Tallahassee, Florida, March 2, 1999 and March 11, 1999.

New Mexico Division of Insurance, Testimony in support of Presbyterian Health Plan's acquisition of FHP of New Mexico, Inc., Santa Fe, New Mexico, October 23, 1997.

CERTIFICATE OF NEED HEARING TESTIMONY

Fact-finding hearing before Virginia State Department of Health on behalf of Brandermill Active Retirement Village, Inc. – Evaluation of the Virginia State Department of Health nursing home bed need methodology, October 9, 1986.

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